

Titolo del corso: Microlocal Analysis and Spectral Theory

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Ore frontali di lezione: 15h

Periodo di lezione: February - March 2027

Settore/i disciplinare del corso: Mathematical Physics, Analysis.

Tipologia di corso: Avanzato

Modalità di verifica dell'apprendimento: Seminario.

Abstract del corso:

Semiclassical microlocal analysis is a powerful tool allowing to study the relationship between dynamical systems and linear partial differential and pseudo-differential equations containing a small parameter. A principal motivation comes from quantum mechanics where certain properties of the Schrödinger equation and its solutions are determined, in the "semiclassical limit", by the corresponding classical Hamiltonian dynamics in phase space.

In this course we discuss selected topics of semiclassical microlocal analysis, Fourier integral operators and their application to PDE and Spectral Theory.

Programma del corso:

Introduction to semiclassical and microlocal analysis, Fourier integral operators